REMARKS/ARGUMENTS

Favorable reconsideration of this application in view of the above amendments and the following remarks is respectfully requested.

Claims 1, 3-5, 7 and 8 are pending in this application. By this amendment, Claims 1 and 5 have been amended. Support for these amendments is found, by way of non-limiting example, in the specification on page 11, lines 18-24. Accordingly, it is respectfully submitted that no new matter has been added.

In the outstanding Final Office Action, Claims 1, 3-5, 7 and 8 were rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Liu et al. (A Hierarchical Hybrid System Model and Its Simulation, IEEE proceedings of the 38th Conference on Decision and Control, December 19, 1999, hereinafter "Liu").

Independent Claims 1 and 5 recite:

> generating from the first source code a fifth source code of an event control program which calls a function of activating or deactivating the continuous system equations when the first event is occurred, and calls the additional process when the second event is occurred;
>
> generating from the third source code a sixth source code of additional processing program which is called in the event control program; ... and
>
> executing an addition processing program based on the sixth source code, using the same program source as the hybrid models, wherein a control signal including the data is exchanged to/from the mechanism control software.

It is respectfully submitted that these features are neither disclosed by nor rendered obvious by Liu.

The Office Action states that Liu discloses:

> generating from the first source code a fifth source code of an event control program which calls a function of activating or deactivating the continuous system equastions(sic) when the first event is occurred **(sections 4.1 and 4.2: events results in**

> **breakpoints)**, and calls the additional process when the second event is occurred (**section 4.3: when appropriate events occur there is a discrete state transition**).

The Advisory Action further asserts:

> Examiner notes that the cited portions of Liu (4.1 and 4.2) disclose the inclusion of breakpoints in the simulation. By definition, a breakpoint will signal the simulator to stop execution, thus deactivating the system equations. ... Examiner notes that the section teaches discrete state transitions, but is not limited to just one discrete state transition. Both (d) and (f) claim calling an additional process when the second event occurred. Section 4.3 states that whenever the guard expression evaluates to be true, a discrete state transition may take place.

Applicants respectfully disagree.

The Office Action asserts on page 3 subparagraph b. that Liu sections 4.1 and 4.2 disclose a first source code defining a hybrid model language occurrences of first and second events and then states in subparagraph f. that sections 4.1 and 4.2 of Liu disclose generating from the first source code a fifth source code of an event control program which calls a function of activating or deactivating the continuous system equations when the first event is occurred.

Section 4.1 describes a predictable breakpoint that is based upon an exact state transition time before a simulation actually reaches that time. Section 4.2 describes an unpredictable breakpoint that is also described as a function of time but is impossible to know the exact time beforehand. Both the predictable breakpoint described in 4.1 and the unpredictable breakpoint described in 4.2 are based upon equation 8 found at the bottom of column 2 in section 3.2 which is described as a "boundary" condition equation which calculates a point in time. That is, the predictable breakpoint of section 4.1 and the unpredictable breakpoint of section 4.2 are simply points in time. There is no description in sections 4.1 and 4.2 of generating from the first source code a fifth source code of an event

control program which calls a function of activating or deactivating the continuous system equations when the first event is occurred as recited in Claims 1 and 5. More specifically, there is no source code described in sections 4.1 or 4.2. Nor is there a description of a function of activating or deactivating system equations. Finally, there is no description of generating a fifth source code of an event control program.

The Office Action states in subsection d. that Liu section 4.3 discloses a third source code defining an additional process which is called when the second event is occurred and then states in section f. that Liu section 4.3 discloses generating from the first source code a fifth source code of an event control program which calls the additional process when the second event is occurred.

Liu section 4.3 describes a discrete station transition based upon equation 9. This event is a breakpoint which is a function of time similarly to the breakpoints described in sections 4.1 and 4.2. Section 4.3 states "the automaton can evaluate the expression after each integration step. In this case, it can take the state transition whenever a guard is evaluated to true, but we do not specifically aim to find the first time point that makes the guard true." There is no description in 4.3 of the generation of a source code of an event control program which calls an additional process when the second event is occurred as recited in Claims 1 and 5.

It is respectfully submitted that the interpretation of Liu in the Office Action is internally inconsistent. As pointed out above, sections 4.1 and 4.2 of Liu are initially stated as disclosing a first source code defining a hybrid model language occurrences of first and second events and then are stated as disclosing generating from the first source code a fifth source code of an event control program which calls a function of activating or deactivating the continuous system equations when the first event is occurred. Additionally, the Office Action first takes the position that section 4.3 discloses a third source code defining an

additional process which is called when the second event has occurred and then takes the position that section 4.3 discloses generating from the first source code a fifth source code of an event control program which calls the additional process when the second event is occurred. It is respectfully submitted that the claim language makes clear that the first source code is a different source code from the fifth source code and that the third source code is a different source code from the fifth source code. Therefore, it is respectfully submitted that the Office Action fails to clarify the inconsistent interpretations of sections 4.1, 4.2 and 4.3.

In paragraphs 4.1, 4.2 and 4.3, Liu describes breakpoints which are state transition times used in the simulation. Liu describes "it can take the state transition whenever a guard is evaluated to true." There is no description in Liu of executing an additional processing program based on the sixth source code, using the same program source as the hybrid model, wherein a control signal including the data is exchanged to/from the mechanism control software as recited in Claims 1 and 5.

It is respectfully submitted that Claims 3, 4, 7 and 8 are patentable at least for the reasons argued above with regard to the claims from which they depend.

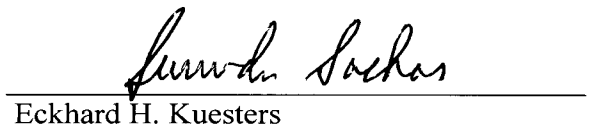
Accordingly, it is respectfully requested that the rejection of Claims 1, 3-5, 7 and 8 be reconsidered and withdrawn, and that Claims 1, 3-5, 7 and 8 be found allowable.

Consequently, for the reasons discussed in detail above no further issues are believed to be outstanding in the present application and the present application is believed to be in condition for formal allowance. Therefore, a Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below-listed telephone number.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Eckhard H. Kuesters
Attorney of Record
Registration No. 28,870

Michael L. Gellner
Registration No. 27,256

Surinder Sachar
Registration No. 34,423

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)

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